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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,135	04/05/2001	Christopher C. Jung	JUNGC- 001A	5099

7663 7590 04/20/2005

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EXAMINER	
LONG, HEATHER R	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/827,135	JUNG ET AL.	
	Examiner	Art Unit	
	Heather R Long	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *33* is/are allowed.

6)☒ Claim(s) *1-32 and 34-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 2, 5-12, 20, 21, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. Patent 6,747,692) in view of Bunte et al. (U.S. Patent 5,821,523) in view of Anderson (U.S. Patent 6,532,039).

Regarding claim **1**, Patel et al. discloses an apparatus for facilitating viewing of an object by human, the apparatus comprising: a holder mechanism comprising a support portion having opposing first and second support surfaces (Figs. 10 and 11- the surface where the lens are located and the surface where the display is located); at least one electronic camera unit (110) disposed on the holder mechanism first surface (col. 11, lines 51-54), the camera being operative to capture at least one image of the object; at least one image processor module (56) in electrical communication with the camera unit to format the captured image for display (col. 8, lines 52-54); at least one electrical image memory storage medium (col. 11, lines 14-16); at least one image display device (128) having a display region, the display device (128) disposed on the holder

mechanism second surface and in electrical communication with the image processor module (56) to display the formatted image on the display region (Figs. 7 and 11); at least one user-interface control mechanism disposed on the holder mechanism and in electrical communication with the image processing module for controlling the operations of the module to regulate display of the formatted image by the display device (Figs. 7 and 11; col. 10, line 66 – col. 11, line 1). However, Patel et al. fails to disclose at least one light source disposed on the holder mechanism first surface to illuminate at least a portion of the object and at least one electrical image memory storage medium for storage and retrieval of both the captured image and the formatted image.

Referring to the Bunte et al. reference, Bunte et al. discloses a digital camera comprising: a holder mechanism comprising a support portion having opposing first and second support surfaces (Fig. 1 - the surface where the lens are located and the surface where the display is located); and at least one light source disposed on the holder mechanism first surface to illuminate at least a portion of the object (Figs. 1 and 5b; col. 12, lines 13-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a light source as taught by Bunte et al. on the camera as disclosed by Patel et al. in order to make sure there will be sufficient light to capture an ideal image. However, Patel et al. in view of Bunte et al. still fail to teach at least one electrical image memory storage

medium for storage and retrieval of both the captured image and the formatted image.

Referring to the Anderson reference, Anderson discloses a camera comprising at least one electrical image memory storage medium for storage and retrieval of both the captured image and the formatted image (thumbnail image) (Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to have combined the teaching of storing the formatted image along with the captured image as taught by Anderson with the apparatus as disclosed by Patel et al. in view of Bunte et al. in order to not destroy the captured image once the image is formatted for that particular display.

Regarding claim **2**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing the apparatus further comprises at least one power source (72) housed in the holder mechanism to provide operational power to at least one of the camera unit, image processor system light sources, and image display device (Patel et al.: Fig. 7; col. 8, lines 65-66).

Regarding claim **5**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the holder mechanism further comprises at least one handle portion connected to the portion (Patel et al.: as can be seen in Fig. 11).

Regarding claim **6**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claims 1 and 5 including that the handle portion is integrally connected to the support portion (Patel et al.: as can be seen from Fig. 11).

Regarding claim **7**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claims 1 and 5, but fails to disclose that the handle portion is pivotally connected to the support portion. Official Notice is taken that the handle portion may be pivotally attached to the support portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the handle more versatile letting the support portion rotate to any direction without moving the handle.

Regarding claim **8**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 including that the light source portion is rotatably connected to the support portion (Bunte et al.: Fig. 5b; col. 12, lines 13-31 – the light source may be rotated to the closed position or the open position).

Regarding claim **9**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 including that the camera unit is a charge-coupled device (CCD) camera unit (Patel et al: col. 11, lines 53-54).

Regarding claim **10**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the display device is a liquid crystal display (LCD) device (Patel et al: col. 11, lines 16-18).

Regarding claim **11**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the control mechanism is disposed on the support portion (Patel et al.: as can be seen in Fig. 11).

Regarding claim **12**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claims 1 and 5 except that the control mechanism is disposed on the handle portion. Patel et al. discloses a control button on the handle, but not for controlling the display. Official Notice is taken that the control mechanism is disposed on the handle portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included other controls on the handle portion of the apparatus as disclosed by Patel et al. in view of Bunte et al. in view of Anderson in order to provide the user easy access to functions that control the display, making the apparatus more user-friendly.

Regarding claim **20**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claims 1 and 2, but fails to disclose that the power source is housed in a handle portion of the holder mechanism wherein the handle portion is connected to the support

portion. Official Notice is taken that the power source is housed in a handle portion of the holder mechanism wherein the handle portion is connected to the support portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have put the power source in the handle of the apparatus as disclosed by Patel et al. in view of Bunte et al. in view of Anderson in order to free up space in the support portion.

Regarding claim **21**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claims 1 and 2, including that the power source is at least one of a battery unit and an externally connected power source (Patel et al.: col. 8, lines 65-66).

Regarding claim **34**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 including that the apparatus is a portable apparatus (Patel et al.: as can be seen in Fig. 11).

3. Claims 3, 4, 13-19, 22-28, 30, 31, and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. in view of Bunte et al. in view of Anderson as applied to claim 1 above, and further in view of Kobayashi et al. (U.S. Patent 5,748,228).

Regarding claims **3** and **4**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 except that the control mechanism is to regulate at least one of a magnification and illumination intensity of the image displayed by the display

device or that the control mechanism is to regulate the display of the image by the display device in response to the display adjustments by a user.

Referring to the Kobayashi et al. reference, Kobayashi et al. discloses an apparatus wherein the control mechanism (13, 6) is to regulate at least one of a magnification and an illumination intensity of the image displayed by the display device (3) (col. 6, lines 50-54). Furthermore, Kobayashi et al. discloses an apparatus wherein the control mechanism (6) is to regulate the display of the image by the display device (3) in response to display adjustments by a user (col. 6, lines 50-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of being able to control the magnification, the illumination intensity, or the display adjustments of the image displayed by the display device as taught by Kobayashi et al. with the apparatus disclosed by Patel et al. in view of Bunte et al. in view of Anderson in order to allow the image to viewed easier by the user.

Regarding claim **13**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 except that the control mechanism further comprises at least one mode selection device for browsing and selecting at least one operation of the image processing module.

Referring to the Kobayashi et al. reference, Kobayashi et al. discloses an apparatus wherein the control mechanism (4, 5, 6, and 13) further comprises: at

least one mode selection device for browsing and selecting at least one operation of the image processor mode (col. 4, lines 21-29; col. 6, lines 50-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of being able to select between two different modes in order to minimize the amount of buttons that need to be placed on the apparatus.

Regarding claim **14**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 13 as well as Kobayashi disclosing that the mode selection switch is a manual input button (4, 5, 6) (Fig. 15).

Regarding claim **15**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 13 including one switch style is a finger operated adjusted rolling switch as disclosed by Patel et al. in Fig. 11. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the mode selection device out of a finger operated adjusted rolling switch in order to save space on the apparatus.

Regarding claim **16**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 13 as well as Kobayashi disclosing in Fig. 16 an apparatus wherein the mode selection device is a finger operated adjusting sliding switch (4, 5).

Regarding claims **17**, **18**, and **19**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 13, but fails to disclose that the mode selection switch is a graphic user interface device, a graphic user interface device displayed on a portion of the display region, or a voice input device. Official Notice is taken that a graphic user interface device, a graphic user interface device displayed on a portion of the display region, and a voice input device are all well known in the art as input devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used either a graphic user interface device, a graphic user interface device displayed on a portion of the display region, or a voice input device as an input device.

Regarding claim **22**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1 except an image processor unit module comprising: at least one processor system in electrical communication with, to receive operational data from and to control the operations of at least one of said control mechanism the camera unit, the light sources and the display device being based on at least one predetermined instruction; and an electrical image memory storage medium for storage and retrieval of the predetermined instruction by the processor system.

Referring to the Kobayashi et al. reference, Kobayashi et al. discloses in Fig. 16 an apparatus wherein the image processing unit comprises: at least one

processor system in electrical communication with, to receive operational data from and to control operations of at least one of the control mechanism, the camera unit (2), the light sources (7) and the display device (3) based on at least one predetermined instruction (col. 7, line 51 – col. 8, line 11); and at least one electronic image memory storage medium (it is inherent to store the expanded image temporarily in a storage medium as for it to be subsequently displayed) and retrieval of the predetermined instruction by the processor system (it is inherent a buffer exists in the image processor module (26) for temporarily storing and then removing the instruction from the enlarged portion specifying portion (27) (col. 7, lines 55-60)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the processor system as disclosed by Kobayashi et al. with the apparatus as disclosed by Patel et al. in view of Bunte et al. in view of Anderson in order to allow the user to put in predetermined instructions to alter the images as desired by the user.

Regarding claim **23**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 22, as well as disclosing an apparatus wherein the predetermined instruction is a user-inputted instruction received from the control mechanism (Kobayashi et al.: col. 7, lines 46-63).

Regarding claims **24** and **25**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously

discussed with respect to claims 1 and 22, as well as disclosing an apparatus wherein the predetermined instruction is the captured image or the formatted image (it is inherent that once the captured image or the formatted image is displayed and the user is not satisfied with it, the captured image or the formatted image is used as a basis to correct parameters of the camera to capture a better image).

Regarding claim **26**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 22, as well as disclosing an apparatus wherein the predetermined instruction includes instructions to adjust at least one of a magnification level, an illumination level, an image enhancement and a focusing resolution level of the displayed image (Kobayashi et al.: col. 7, lines 46-50).

Regarding claim **27**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 22, as well as disclosing an apparatus wherein the predetermined instruction includes instructions to adjust at least one of a focusing characteristic of the camera unit and the illumination intensity of the light source (Kobayashi et al. col. 7, lines 46-50).

Regarding claim **28**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1 and 22, as well as Kobayashi et al. discloses an apparatus wherein the image processing module (26) is a microcomputer (col. 7,

lines 64-65). Therefore, it is inherent that the microcomputer is a programmable image processing module because the image processing module receives instructions from the operator concerning the portions of the image to be enlarged and how big to enlarge that portion (col. 7, line 51 – col. 8, line 11).

Regarding claim **30**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1, 22, and 26, as well as Kobayashi et al. disclosing an apparatus wherein the image enhancement includes at least one of an adjustment contrast and brightness, a noise elimination, a color re-mapping, an inverse video displaying, an illumination equalization mode, image shifting, image stabilization, and image freezing (col. 4, lines 21-29).

Regarding claim **31**, Patel et al. in view of Bunte et al. in view of Anderson discloses all the limitations as previously discussed with respect to claim 1, but fails to disclose noise elimination that includes filtering of undesired features of an object. However, Official Notice is taken that it is well known in the art of photography to filter undesired features of an object in order to enhance the quality of the image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added this feature to the apparatus as disclosed by Kobayashi in order to eliminate undesired features thereby producing a higher quality image allowing the user to be able to clearly read the text and to prevent blurring of the text.

Regarding claim **30**, Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. discloses all the limitations as previously discussed with respect to claims 1, 22, and 26, as well as Kobayashi et al. discloses an apparatus wherein the inverse video displaying includes display text wherein the colors of text and background are switched (col. 4, lines 21-29).

Regarding claims **35** and **36**, see the rejection for claims 1, 22, 24, and 25 since claim 35 is a combination of claims 1, 22, and 24 and claim 36 is a combination of claims 1, 22, and 25.

Regarding claim **37**, see the rejection for claims 1 and 22 since claim 37 is a combination of claims 1 and 22.

Regarding claim **38**, see the rejection for claims 1, 22, and 26 since claim 38 is a combination of claims 1, 22 and 26.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. as applied to claims 1 and 22 above, and further in view of Piehn et al. (U.S. Patent Application Publication 2001/0056342).

Regarding claim **29**, claim 29 differs from Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. in that the claim further requires an apparatus comprising: at least one optical alpha-numeric character recognition module to recognize at least one of a word and a number in the image; at least one voice synthesizer module to output sound patterns corresponding to a pronunciation of the recognized word and number.

Referring to the Piehn et al. reference, Piehn discloses an apparatus that comprises: at least one optical alpha-numeric character recognition module to recognize at least one of a word and a number in the image; at least one voice synthesizer module to output sound patterns corresponding to a pronunciation of the recognized word and number (paragraphs [0002] and [0004]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Piehn et al. with Patel et al. in view of Bunte et al. in view of Anderson in view of Kobayashi et al. in order to provide reading assistance for the visually impaired.

Allowable Subject Matter

5. Claim 33 is allowed.

6. The following is an examiner's statement of reasons for allowance: prior art fails to teach or fairly suggest an apparatus for facilitating viewing of an object by human eye, wherein the illumination equalization includes modification of illumination brightness over a selected display area to compensate for a non-ideal positioning of the light source.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 571-272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am -3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on 571-272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Heather R Long
Examiner
Art Unit 2615

HRL
April 5, 2005

TUAN HO
PRIMARY EXAMINER